

PERDUE ACOUSTICS
Amarillo, TX • Erin, Tennessee
(806) 374-9402 or (800) 729-9402
Fax: (806) 374-9450

Small Object Impact Test

ASTM Impact tests; D-2794, D-3029, D-4226, and G14 are done with a BYK-Gardner Light Duty Impact Tester. The impacter is a two-pound steel cylinder with a 1.27 cm. (0.05 in.) diameter round nosed end. This weight may be lifted to any desired height in a graduated guide tube approximately 40.6 cm. (16in.) high and then dropped, subjecting the specimen to an impact force of up to 28 inch/pounds. We conducted our own “in-house” test that we might better assist our clients in choosing the right products for their application. We performed this test from a 4” drop, 8” drop, 12” drop and finally a maximum 16” drop, subjecting the sample absorber panels to the impact force of 28 inch/pounds. We also have done tests on larger Sq. in. areas with more weight to calculate compression. In gymnasiums, where the impact is most likely to be a basketball or volleyball, we believe the larger impact area has more bearing. We will be glad to send you a copy of our findings. Below you will find our report on these tests, where impact, once again, is a rounded 2 lb. 1/2” steel rod. It would require an object smaller than most table and chair legs to impact an acoustical absorber in this fashion.

High Impact-Tackable	Standard Absorber w/Plastic Edge (1-layer of mat)	Standard Absorber W/Soft Edge (1-layer of mat)
4” drop – no indentation 8” drop – no indentation 12” drop – trace indentation 16” drop – 1/8” indentation *Went off the scale without tearing the cloth, barely visual defamation.	4” drop – no indentation 8” drop – 1/8” indentation 12” drop – 1/4” indentation 16” drop – 3/8” indentation *Went off the scale without tearing the cloth, dented only.	4” drop – no indentation 8” drop – trace indentation 12” drop – 1/8” indentation 16” drop – 1/4” indentation *Went off the scale without tearing the cloth, slightly dented only.
After 30 minutes – Maximum 16 inch (28 inch/pounds) impact test only:		
Must feel to know product was impacted, no visual indentation.	3/8” is now 1/4” indentation	Barely visual indentation
After 24 hours – Maximum 16” (28 inch/pounds) impact test only:		
No sign of ever having been impacted.	You can still visually see indentation noticeably on original 3/8” indentation	Must feel to know product was impacted – no visual indentation.

*The only difference between specimens 2 & 3 is the plastic edges. Upon examination, we believe, at least in this small size, the cloth and mat being glued to the hard edges holds it tight. It’s inability to flex from the edges at impact caused it to absorb more impact and deform the face more readily.